

ABSTRACT

The invention includes a genetic construct and a mutant dengue virus, designated as strain MBU 01-2002, which is a mutant dengue virus generated by genetic modification of the 13-amino acid sequence just proximal to the pr-M junction within the prM coding region of the genome. The modification involves increasing the number of positively charged amino acid and abolishing the negatively charged amino acid in this pr-M junction sequence. The mutant dengue virus strain MBU 01-2002 possesses less prM protein on the viral envelope than the prototype dengue virus, is capable of inducing infected C6/36 cells to fuse at neutral pH, is as efficient as the prototype virus in the intracellular multiplication, but is defective in its release from infected cells.